

REMARKS/ARGUMENTS

Pending claims 1-5, 12-17, 21, 23, 25 and 34-36 stand rejected under 35 U.S.C. §102(e) over U.S. Patent No. 6,321,105 (Jenkins). Applicants respectfully traverse the rejection. As to claim 1, Jenkins nowhere teaches detecting regional neural activity based on transient magnetic fields induced by the regional neural activity. Instead, Jenkins merely teaches the conventional manner of performing MRI data acquisition and analysis based on a hemodynamic response invoked by neuronal activation. Jenkins, col. 1, lns. 51-54. Thus Jenkins maps neurotransmitter activity based on metabolic response (*id.*, col. 2, lns. 60-66), not based on transient magnetic fields induced by regional neural activity. For at least this reason, claim 1 and its dependent claims are patentable.

As to claim 14, nowhere does Jenkins teach directly mapping electromagnetic activity of a subject via magnetic resonance imaging. Instead, as discussed above Jenkins indirectly maps neurotransmitter activity based on metabolic responses, not directly from electromagnetic activity. Accordingly, claim 14 and its dependent claims are patentable over Jenkins. For at least similar reasons as to claims 1 and 14, independent claims 23 and 34 and the claims depending therefrom are also patentable.

Pending claims 26-32 stand rejected under 35 U.S.C. §102(e) over U.S. Patent No. 6,477,399 (Biswal). Applicants respectfully traverse the rejection. As to claim 26, Biswal nowhere teaches a controller that detects a magnitude of magnetic resonance signals that represent a neuronal magnetic field. Instead, Biswal is directed a conventional fMRI system (*e.g.*, Biswal, col. 6, lns. 57-62) in which brain activity is detected via hemodynamic and metabolic responses rather than magnitude signals representing a neuronal magnetic field. *E.g.*, *id.* at col. 2, lns. 15-25. Accordingly, claims 26-32 are patentable.

For at least the same reasons as the independent claims from which they depend, the rejection of claims 6, 7, 9-11 and 18-20 under §103(a) over Jenkins in view of various secondary references is also overcome.


New dependent claims 37-40 are patentable at least for the same reasons as their independent claims.

In view of these remarks, the application is now in condition for allowance and the Examiner's prompt action in accordance therewith is respectfully requested. The Commissioner

is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 20-1504.

Respectfully submitted,

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